REMARKS/ARGUMENTS

This amendment paper is filed in conjunction with applicant's Request for Continued Examination (RCE) filed concurrently herewith. In addition to the present amendment, entry of applicant's prior Amendment After Final (which was not entered per the Advisory Action of October 5, 2005) is respectfully requested.

As shown in the attached listing of claims, claims 3, 11 and 36 have been amended. Also, claims 39-43 have been added. Support for these changes can be found throughout the specification. In particular, support for amended claim 3 and 11 and new claims 39-43 can be found, *inter alia*, in paragraphs [0021, 0022, 0025, 0026 and 0030] of the specification. No new matter has been added.

Initially, applicant would like distinguish the present invention over U.S. Patent No. 4,571,094 to Wynnyckyj et al. In brief, applicant's claim 3 recites a method for measuring differential heat flux by providing a heat transfer path for transferring heat flux between a pair of heat flux sensors, wherein both sensors concurrently measure changes in heat flux in response to deposit accumulation at the fouling surface. In this system, when the fouling surface is free of deposition, a thermal balance is established between the sensors at the reference and fouling surfaces, respectively. However, when deposition begins to accumulate on the fouling surface, the thermal balance is broken. In this imbalanced state, heat flux will begin to flow between both sensors via the heat transfer path wherein heat flux at the fouling surface will begin to decrease, while heat flux at the reference surface will begin to increase (paragraph [0030]).

In sharp contrast to applicant's invention, U.S. Patent No. 4,571,094 to Wynnyckyj et al. does not teach or suggest a system in which both the reference and fouling flux meters change in response to deposit accumulation at the fouling surface as claimed in applicant's independent claims 3 and 41. Instead, the reference flux meter of Wynnyckyj remains constant because it is arranged to constantly receive the full and total heat flux of the furnace flame (column 2, lines 12-15). Therefore, any changes in heat flux due to deposition will be detected and measured at the fouling surface only (column 4, lines 44-50). Importantly, nowhere does Wynnyckyj teach or suggest a system for measuring deposit accumulation in which changes in heat flux are detected at <u>both</u> the reference and fouling flux simultaneously, nor does it provide any hint or suggestion that measuring heat flux at both the reference and fouling surface simultaneously

would provide the unexpected benefit of improving measurement sensitivity to very small amounts of deposition.

Based on the foregoing, applicant's system provides improved measurement sensitivity over Wynnyckyj which measure changes in heat flux at the fouling surface only. As a result, applicant's system can better detect very small amounts of deposition. Moreover, Wynnyckyj fails to provide a heating element independent from the heat energy of the process fluid as recited in applicant's claim 43. Wynnyckyj also differs from applicant's system in that it requires one of the sensors to be maintained at a relatively constant temperature (column 4, lines 27-29). This feature would seem to limit application of Wynnyckyj to areas where a constant temperature environment can be provided. Accordingly, applicant respectfully submits that applicant's claims are not anticipated or rendered obvious by Wynnyckyj.

For all the above reasons, Applicant respectfully submits that Wynnyckyj et al. fails to teach, suggest or render obvious each and every feature of applicant's invention. Accordingly, Allowance of the present application is respectfully requested.

Should the Examiner determine that anything else is desirable to place this application in even better form for allowance, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted
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